

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the foregoing amendments and the following remarks.

Claim Status

Claims 1 - 12 are pending. Claims 1, 3, 4, 7, and 8 are amended. Claim 6 is cancelled.

Rejections

Claims 1-6 are rejected as anticipated by Notten (US Patent 6,016,047). Claims 1-12 are rejected as unpatentable over Notten.

Interveiw Summuary

On October 13, 2004, Attorney for applicant and the Examiner dicussed the above amendments, the Notten reference, and the differences therebetween. The interview resulted in no agreement.

§102 Rejection

Claims 1-6 are rejected as anticipated by Notten. Applicant respectfully disagrees.

To anticipate, the reference must show each and every element of the claimed invention. MPEP 2131.

"The identical invention must be shown in as complete detail as is contained in the ... claim." MPEP 2131 citing Richardson v. Suzuki Motor Co. 9 USPQ2d 1913 (Fed. Cir. 1989). [emphasis added]

The differences between Notten and claim 1 are in the 'inputs' and the 'outputs.'

In claim 1, the inputs are: "CSD customer inputted requirements selected from the group consisting of energy density, cycle life, rate capability, impedance, temperature range of operation and/or survival, safety requirements, storage life, self-discharge behavior, form factor, and cost." The outputs are: "CSD design."

Notten, on the other hand, discloses none of these. For example, Notten does not output a 'CSD design.' Notten's outputs are signals or battery behaviors (simulations). Such outputs are current, voltage, state of charge (column 3, lines 28-35), and temperature (Column 2, line 43). Notten's inputs are not the 'CSD customer inputted requirements' recited above, instead they are 'physical quantities.' Those 'physical quantities' are particle size of the electrode material, surface area of the electrode, composition of the electrochemical active species, resistance lowering material, and surface deposited materials (column 5, line 64-column 6, line 8, column 6, line 64-column 7, line 5, column 25, line 33-65).

Since there is no overlap between claim 1 and Notten, there is no anticipation. Accordingly, the rejection is improper and must be removed.

§103 Rejection

Claims 1-12 are rejected as obvious over Notten. Applicant respectfully disagrees.

This is a classic case of hindsight reconstruction, where the instant application is used as a blueprint. There is no suggestion to reconstruct Notten to obtain the claimed invention.

The invention set forth in the application is to a method of designing a charge storage device (CSD). A charge storage device may be, for example, a battery. A design, by definition, is an organization or structure of elements that form a work. In other words, the design is that group of elements that comprise the final work, i.e., the CSD.

In the present method, a customer for a CSD inputs **requirements** (claim 1) or **requirements** and **test procedures** (claim 6). The requirements are defined as **energy density, cycle life, rate capability, impedance, temperature range of operation and/or survival, safety requirements, storage life, self-discharge**

behavior, form factor, and cost (claims 1 & 6). The inputted information is then passed through an **interface to a model** (claim 1) or a **routine capable of selecting at least one model** (claim 6).

From the model, a **CSD design** is generated (claims 1 & 6). Finally, the model is **hidden** from the customer to protect proprietary information in the model (claims 1 & 6).

As mentioned in the Background Section of the application, this invention is important because the process for design a CSD can be extremely time consuming. This method allows the customer to interact directly with proprietary CSD models to generate a CSD design for their specific needs, yet protects the CSD model owner (typically a battery manufacturer) from loss of their valuable trade secret information.

Notten, on the other hand, is not such a system. Notten is a a battery management system (column 1, lines 5-15), a battery simulator (column 1, lines 16-24), a method for simulating a battery's behavior (column 1, lines 24-32), or a method of producing a battery by simulating a battery's behavior (column 1, lines 32-35). In each of the variations of Notten, 'physical quantities' are varied to derive an 'output characteristic.'

What are the 'physical quantities'? Notten explains that they are such things as: particle size of the electrode material,

surface area of the electrode, composition of the electrochemical active species, resistance lowering material, and surface deposited materials (column 5, line 64-column 6, line 8, column 6, line 64-column 7, line 5, column 25, line 33-65). In the instant application, these are the things that the owner of the CSD model wants to protect from disclosure.

What are the 'output characteristics'? Notten explains that these are such things as: signals or battery behaviors (simulations). Such outputs are current, voltage, state of charge (column 3, lines 28-35), and temperature (Column 2, line 43). These single outputs are not a design.

Furthermore, lets look at how Notten's invention operates. In the battery management system, illustrated in figure 1, the battery 110 is measured in means 120 (specifically, voltage 124, current 122 and temperature 126). This information is passed to the management system 100. The management system 100 using a battery model generates information that is passed to the controller means 130. Where is the **design** generated? Where does the **customer input requirements**? The answer: nowhere.

Further, Notten explains how their method can be used to 'develop a new battery' (column 25, line 13 - column 26, line 4). There, Notten says that a simulation technique is used. Notten's

example explains that an 'input parameter which represents a physical quantity' is chosen. Again, the physical quantities, set out above, are not the CSD customer requirements. The simulator then calculates the output characteristic, set out above. Where is the **design**?

The Examiner is respectfully request to indicate where in Notten there is a suggestion to change (reconstruct) their disclosure into the instantly claimed invention.

Conclusion

In view of the foregoing, Applicant respectfully requests an early Notice of Allowance in this application.

Respectfully submitted,



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